

Fig. 1: Bipolar and Unipolar Current Pulses

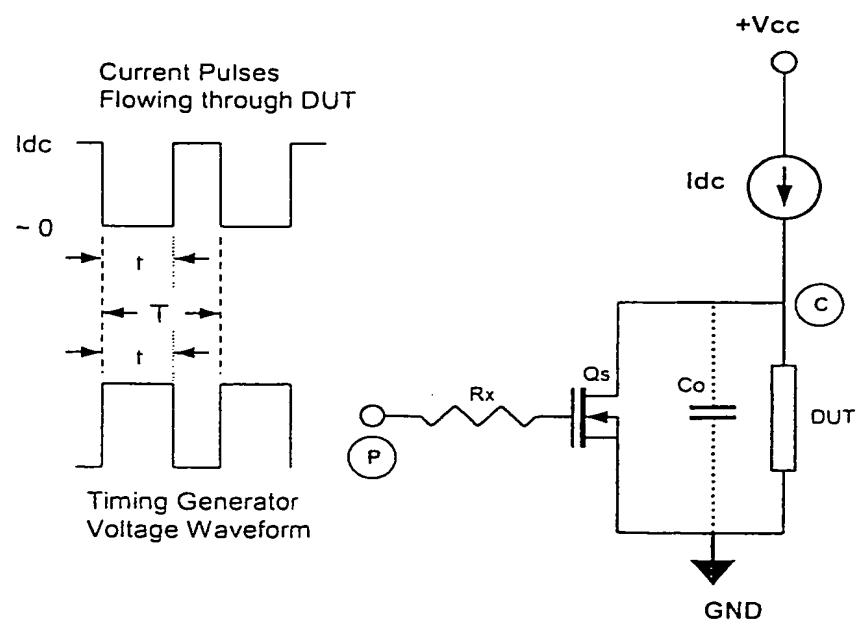


Fig. 2: Pulsed Current Generation (PRIOR ART)

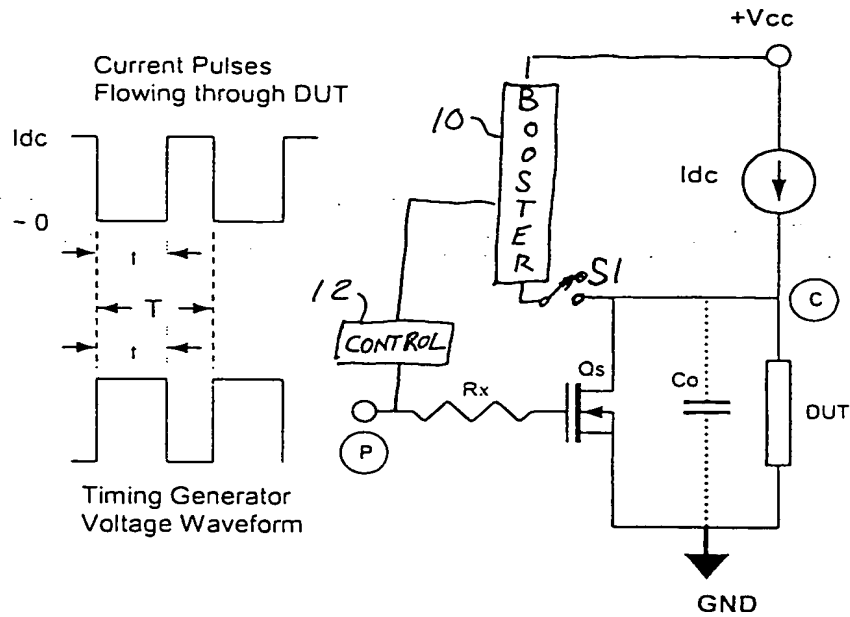


Fig. 3: Pulsed Current Generation

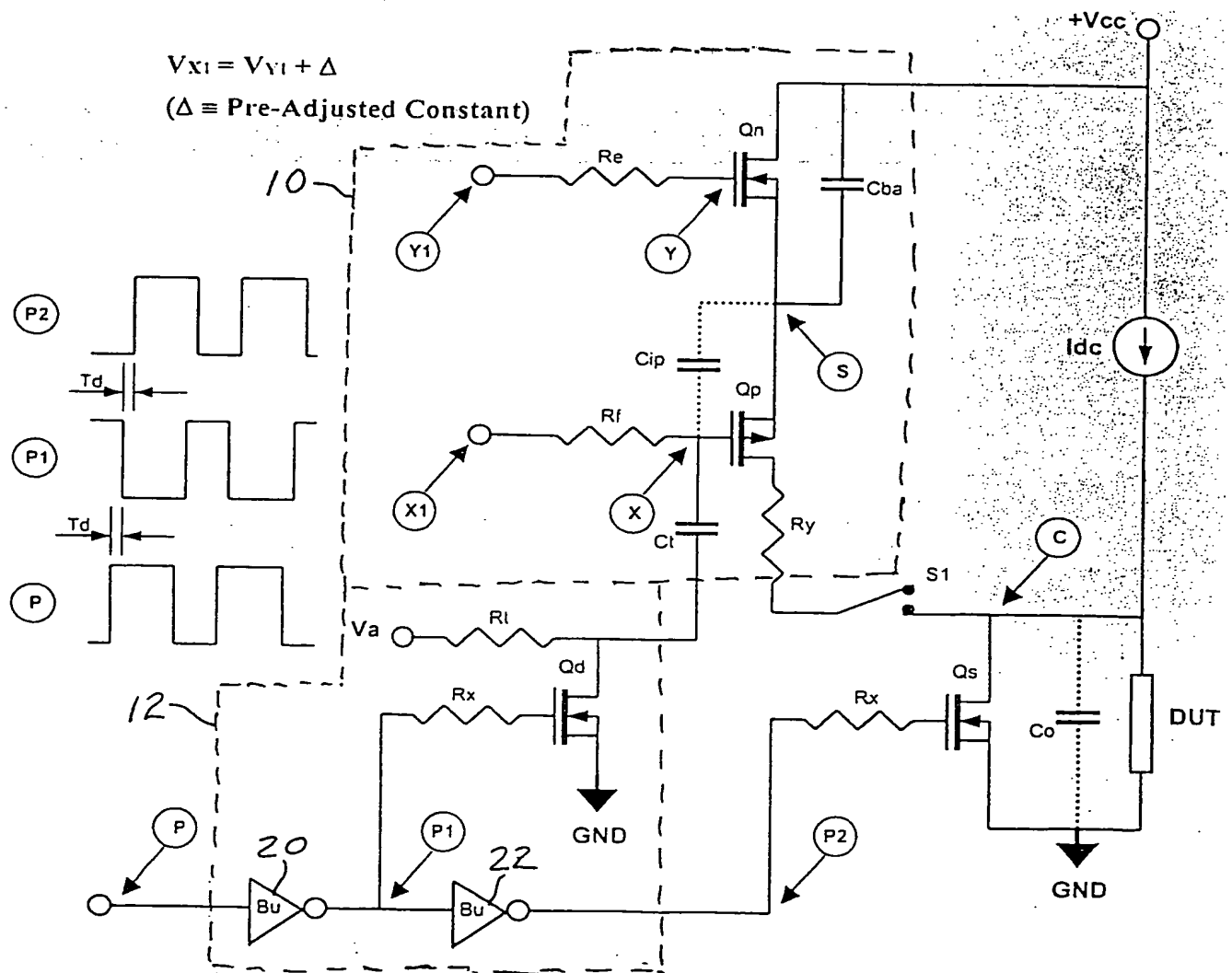


Fig. 4: Basic Booster Implementation with the Related Pulsed Current Source

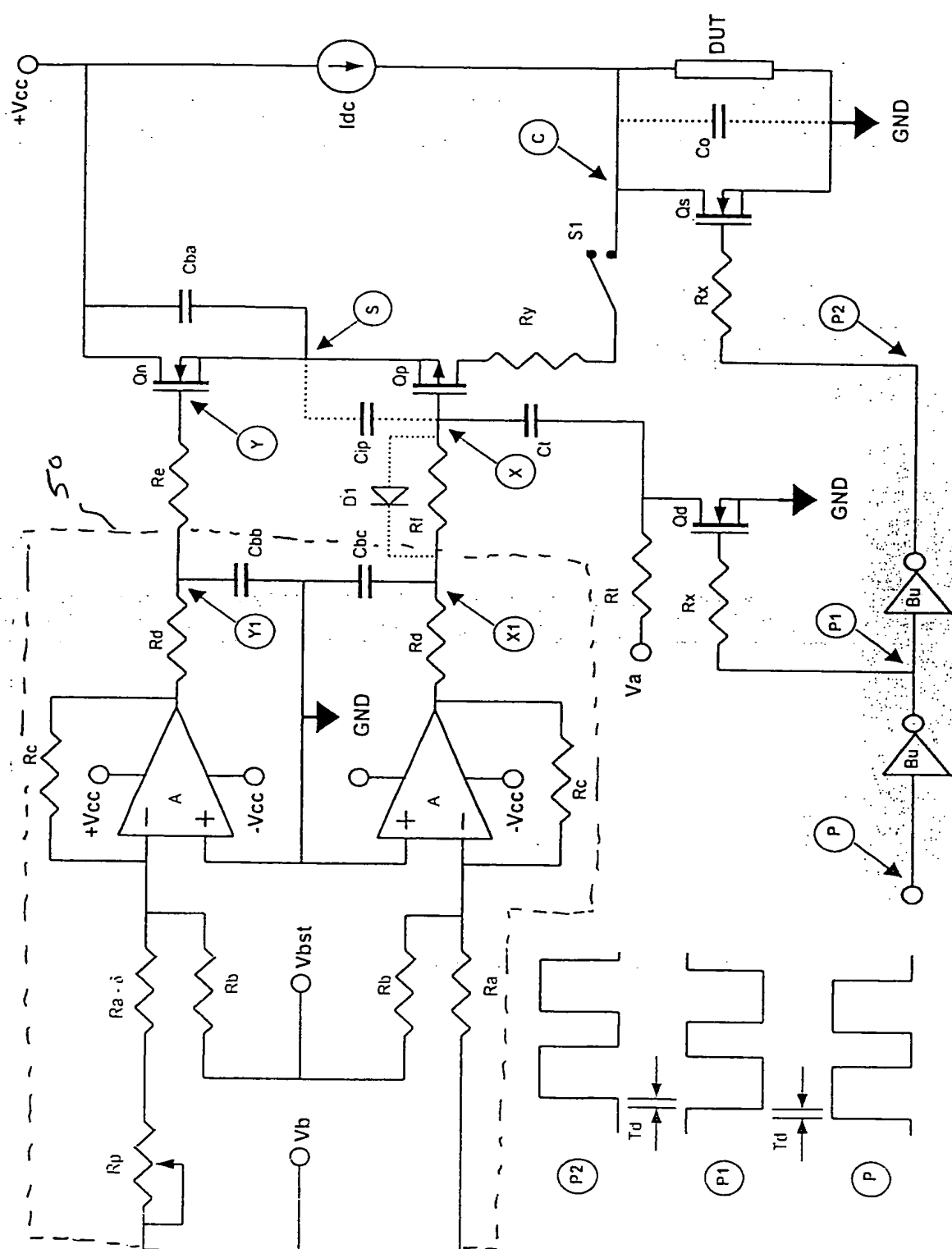
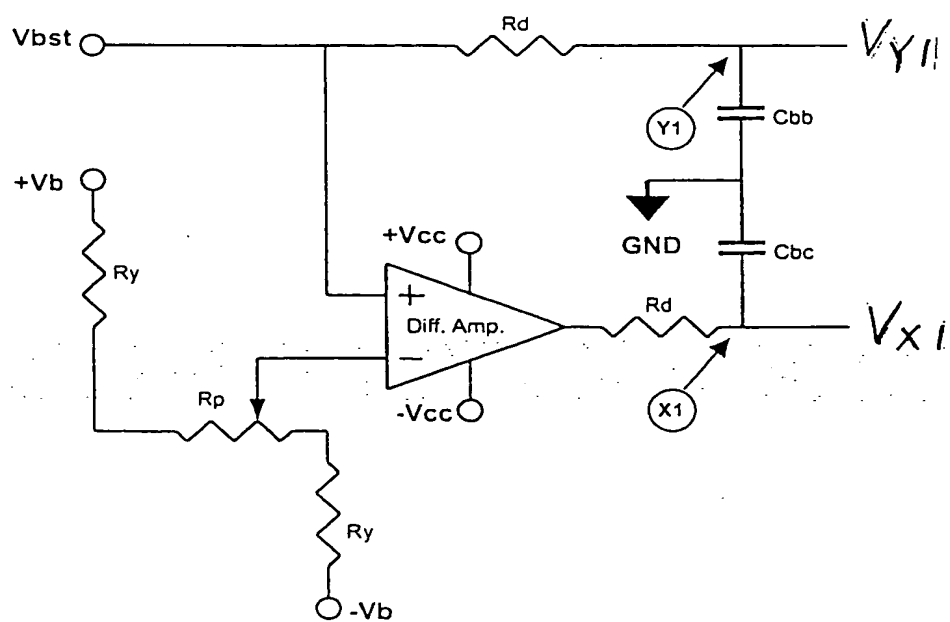
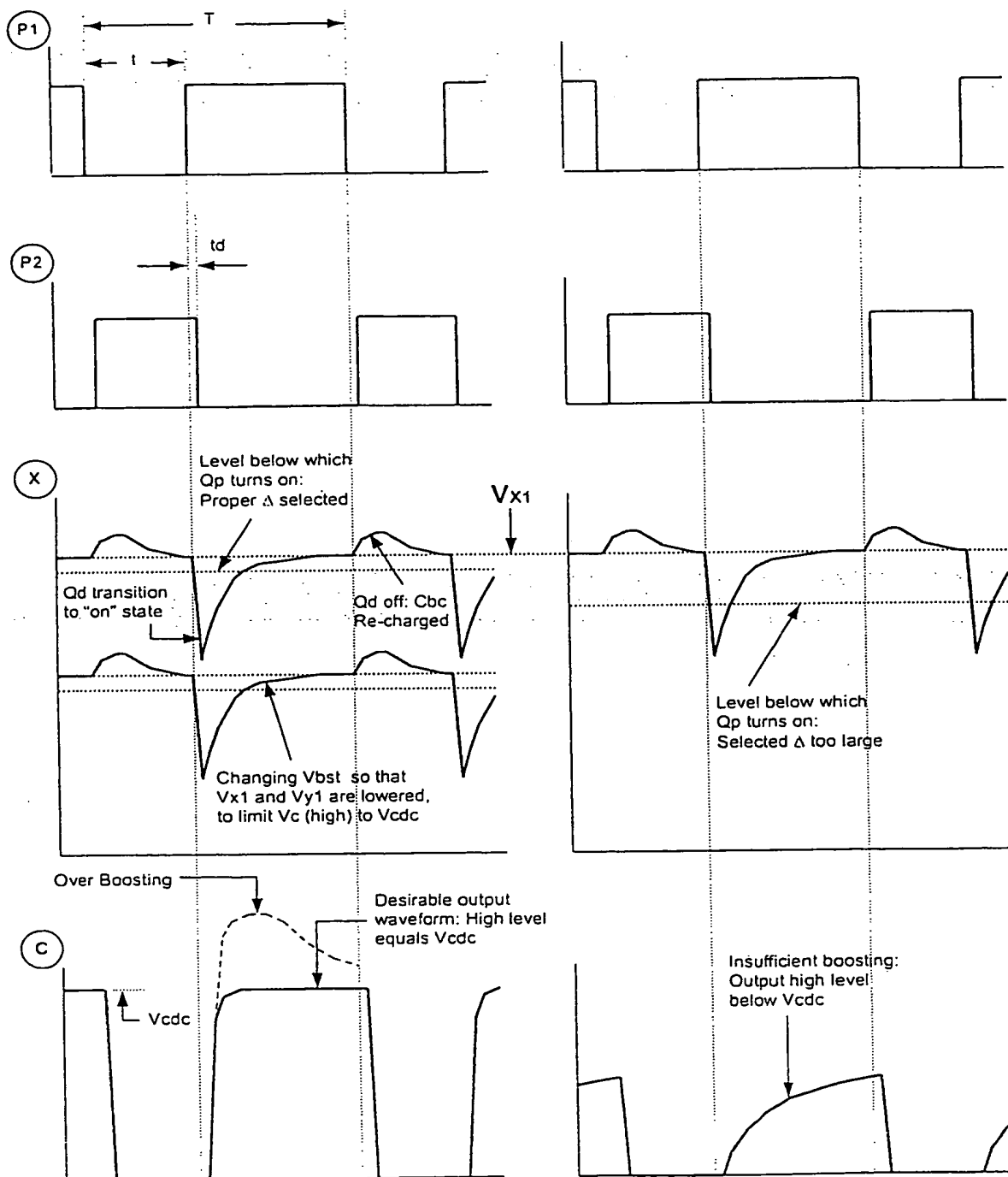


Fig. 5: Booster and Pulsed Current Source with One Embodiment of  $V_{X1} = V_{Y1} + \Delta$



**Fig. 6:** Another Embodiment of  $V_{X1} - V_{Y1} = \Delta 1$



**Fig. 7:** Waveforms at points P1, P2, X and C (refer to Fig. 4). Left hand side shows proper setting of  $\Delta$  ( $V_{x1} - V_{y1}$ ), leading to the expected output waveform. The right hand side shows insufficient boosting and the resulting improper output waveform due to excessive magnitude of  $\Delta$ .